Improving learning and outcomes

Hamish Bennett Coates, ACER
Improving learning and outcomes

Even after hundreds of years of research and discovery we still know relatively little about learning, particularly in higher education. Higher education is growing in size and significance, driving a pressing need for more information and new insights into how systems, institutions and people learn and achieve. Progress comes through innovative practice, policy reform, and research. This edition of ACER’s Higher Education Update reviews recent contributions.

The first three stories consider progress with innovative studies being conducted to assess higher education learning outcomes – the OECD Assessment of Higher Education Learning Outcomes (AHELO), AHELO Australia, and the Australian Medical Assessment Collaboration (AMAC). These studies, conducted in partnership with ministries and higher education institutions, are exploring new ways for understanding what university students learn and achieve.

Recent research on forecasting system size and characteristics is underpinned by a common desire for greater clarity about the growth of higher education provision and demand in society. Three studies presented here explore demand-driven funding and the development of higher education in regional and urban areas. Evidence from this kind of work plays a critical role in planning future higher education.

Simply admitting students to higher education institutions is not sufficient for high quality learning. A national study of research students has shed light on how universities can produce the teachers needed to help students learn. A study of aptitude testing has explored new ways for identifying people’s readiness to learn, particularly for people from disadvantaged backgrounds.

Several decades of inquiry have affirmed that a stimulating, challenging and supportive higher education experience is pivotal for learning and development. Providing conditions that engage learners in effective educational practices is particularly important. The final three stories in this Higher Education Update outline recently published research into students’ dropout intentions, the engagement of Indigenous students, and the engagement of coursework graduate students.

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Associate Professor Hamish Coates
Research Director, Higher Education
Assessing outcomes

International learning outcomes assessments measure up

Is it possible to undertake an international assessment of final-year students’ capacity to use, apply and act on the knowledge and reasoning they have gained from their degrees? Is it possible to assess these outcomes in an efficient and internationally comparable way? Can policymakers, institutional leaders, faculty and students be convinced that the assessment of higher education learning outcomes is an essential checkpoint in the educational process? These questions lie at the core of the OECD’s Assessment of Higher Education Learning Outcomes (AHELO) Feasibility Study.

Led internationally by ACER, AHELO involves the development and validation of assessments in three core areas – Generic Skills, Economics and Civil Engineering, as well as the development of contextual instruments to aid with the interpretation of assessment data. The assessments are targeted at students in the final year of bachelor degrees and aim to assess their capacity to apply their skills and knowledge to real-world problems. AHELO is an ambitious project which is attempting to develop new methodologies and technical standards for the assessment of higher education learning outcomes. It is taking place on a global scale, with 15 countries participating in the development and validation of assessments, and engagement from experts, institutions, governments, and key higher education bodies from around the world.

AHELO responds to a critical information gap. Efforts to improve the quality of teaching and to enhance students’ learning outcomes are hindered by the absence of reliable information which enables comparative judgments to be made about the capabilities of students in different institutions and in different countries, or about the quality of teaching. In the absence of such data on core higher education activities of learning and teaching, the standing of a higher education institution is based largely on reputation and research performance. AHELO’s objective is to create a richer source of information through designing and testing measures which give due weight to teaching practices and learning outcomes.

The developmental phase of AHELO is drawing to a close. Assessments have been developed through the collaboration of experts from around the world and subsequently translated and adapted for use in a number of countries. Planning for validation of the assessments with students in participating countries is underway. Despite the relatively early stage in its evolution, initial indications suggest that AHELO has the potential to reshape the higher education landscape.
Assessing outcomes

in important ways. First, discussions among some stakeholders appear to have moved on from whether learning outcomes should be measured to how they can be measured. At the same time, the engagement of national systems and institutions (both within and outside the OECD) has increased significantly throughout the life of the Feasibility Study, with indications that trend is continuing. Taken together, these indicate the existence of a desire for data on the quality of teaching and learning, both to inform improvements and also to demonstrate quality.

Students in a number of countries have been involved in qualitative testing of the assessments as part of their development. During focus groups and cognitive labs, students have had a chance to provide feedback on the assessments. While not all data has yet been analysed, initial findings suggest that students perceive the assessments positively. Individual students have commented on their appreciation of tasks which call on them to “apply knowledge in real-world ways”. Others have referred to the nature of the tasks and their inclusion of “interesting day to day problems you may experience as a project manager”.

As AHELO moves forward, questions about the validity, delivery and scoring of assessments, as well as the engagement of university teaching staff and the perception of institutions about the usefulness of data generated by AHELO will be answered. Thousands of students in numerous countries will sit the assessments, and their results will be subject to intensive psychometric analysis. Hundreds of university teaching staff will be trained in the scoring of student responses and will be asked to provide detailed input on the relevance of assessment tasks. Numerous institutions will be provided with detailed reports on the performance of their students and then asked to comment on the ways in which this information could be used to inform curriculum and teaching improvements.

It is too early to predict the outcomes of the next stage of AHELO. Much will depend on the ability of ACER and its partners to manage a project of this scale efficiently, and to engage students, staff, institutions and national systems in the importance of this endeavour. There will undoubtedly be significant hurdles to overcome and it is unlikely that an endeavour such as AHELO will ever win universal favour. What does seem certain, however, is that assessing the learning outcomes of students is set to become a feature of the higher education sector around the world as it embraces the challenges of the modern era.
Assessing outcomes

AHELO in Australia

Establishing whether it is feasible to measure student learning outcomes internationally is the motivation behind the Organisation for Economic Cooperation and Development (OECD)’s Assessment of Higher Education Learning Outcomes (AHELO) Feasibility Study. The study is taking place in 15 countries and assessments have been developed in three key areas – Generic Skills, Economics and Engineering. The assessments have been designed for deployment to students in the third or final year of a bachelor level degree and are currently undergoing detailed review by students in field trials taking place in all participating countries.

Australia is participating in the Engineering strand of the AHELO Feasibility Study. Earlier this year; the Australian Department of Education, Employment and Workplace Relations (DEEWR) appointed ACER Senior Research Fellow Dr Daniel Edwards as the Australian National Project Manager for AHELO. Dr Edwards’ role involves working closely with the ACER-led AHELO Consortium, recruiting universities, assisting participating universities, collection and analysis of data and reporting to the AHELO Consortium and DEEWR.

Ten Australian universities are participating in the AHELO Feasibility Study. Each institution is conducting focus group sessions which involve students attempting part of the Engineering Assessment and then discussing the tasks and the relevance of the Assessment to their experiences during their degree. To date, 68 final year civil engineering students have participated in focus groups. Further sessions are planned for the beginning of semester two 2011.

The AHELO Engineering Assessment comprises a mixture of constructed response tasks (essentially requiring the student to apply knowledge to ‘real world’ problems) and multiple choice questions. Students participating in focus groups have provided feedback on the Assessment, and their comments have been largely positive. Comments in relation to the constructed response tasks designed for AHELO include:

- “It’s a realistic problem which made me think and understand that the knowledge I learned from university is being applied in the real world”
- “Interesting question which challenges people to think. A real situation for real application was interesting”
- “It is a real project – I may meet the same problem in my future career. It was challenging for me”

Comments in relation to the multiple choice items include:

- “It was a very comprehensive summary of most things related to civil and structural engineering. Personally good to revise”
- “Interesting and challenging questions. Have to think critically and apply the skills learnt in past four years. Very relevant to my program”
- “The task covered a broad range of knowledge”

Further information about student responses is being collected from focus group moderators via an online survey designed by Dr Edwards. Academics from various institutions across the country are also providing feedback in relation to the assessment tasks that have been created for the feasibility study. The full Australian report to the AHELO Consortium will be compiled and provided by mid-2012.

Further information about the AHELO Feasibility Study is available from http://www.oecd.org/edu/ahelo
Qld hosts national medical assessment forum

Senior faculty representing every medical school in Australia, international experts in medical education and representatives from the Australian Medical Council, the US National Board of Medical Examiners and ACER gathered at The University of Queensland in May for a national forum on the assessment of medical student outcomes.

The forum engaged stakeholders in deliberations about the design of a national assessment of medical student learning outcomes. The Australian Medical Assessment Collaboration (AMAC) is being developed by a consortium including The University of Queensland, Monash University and ACER. AMAC is funded by the Australian Learning and Teaching Council.

In his opening address the Dean of the School of Medicine at The University of Queensland, Professor David Wilkinson, noted that medical schools share many common challenges including: achieving consistency, fairness and standardisation in assessment; resourcing the significant investment required to develop high quality assessment; and finding suitably qualified and experienced staff with assessment expertise.

“Good quality assessment data is essential to inform and evaluate the development of curricula, and to benchmark performance against expected and national standards”.

Keynote speaker, Professor Cees van der Vleuten from Maastricht University, Netherlands, advised that the potential benefits of collaboration include sharing of assessment resources, benchmarking and driving innovation.

Professor van der Vleuten described the process of “progress testing” implemented by Dutch medical schools over the past few years, which involves comprehensive written tests of 200 multiple choice questions to all undergraduate medical students four times per year, resulting in 24 “moments of measurement” during medical training. He said that progress testing provides powerful feedback for learning and curricula.

Guest speakers summarised Australian, UK and US perspectives on outcomes assessment and shared the experiences of other existing and new projects that aim to measure medical student capabilities and share assessments.

ACER Higher Education Research Director Associate Professor Hamish Coates discussed assessment options available to Australian medical schools, stressing that the core aim is to involve Australian and international medical schools in development and implementation. Dr Daniel Edwards detailed the project’s architecture.

“Establishing a framework to encapsulate expected learning outcomes of final year medical students must be a truly collaborative exercise,” said Associate Professor Coates.

In his closing address, Professor van der Vlueten echoed these sentiments, stating that medical education is a learning community defined by collaboration and support.

The forum was successful in highlighting the importance of continuing an inclusive and collaborative approach in the design, specifications and governance of AMAC involving medical schools, stakeholders and educators. The role of benchmarking was confirmed by participants as an important function of AMAC for both quality assurance and for increasing the assessment expertise of faculty. The innovation that such an assessment could potentially bring to medical student education was also identified as a vital function of the project.

Delegates at the National Assessment Forum were invited to contribute to the AMAC project. Following completion of the assessment framework in September 2011, a pilot study of test items will occur. Further details relating to AMAC and to the Forum can be found at www.acer.edu.au/amac.
Moving towards demand-driven enrolment

The landscape of Australian higher education is undergoing substantial reshaping. From 2012 undergraduate student places at public universities will be funded on the basis of demand – this is one specific policy linked to a number of initiatives in Australia focussed on broadening participation in higher education. Analysis of student demand and enrolments over the last decade provides an indication of the impact that the announcement of this policy has had on the sector and may help institutions plan for the future.

Demand for university places has fluctuated considerably over the past decade. While there was net growth in applications, from 209 713 in 2001 to 227 408 in 2009, there was also a five-year period from 2004 to 2008 in which applicant numbers experienced a decline before a substantial growth in demand in 2009.

In 2010 the level of demand for university places by Australians was the highest ever recorded. The trend apparent for 2011 suggests that the unprecedented level of applications in 2010 was not a one-off, with levels either being maintained or at worst only limited reductions at the state level.

The growth in applications evident since 2009 has been matched with an increase in supply. However, historically, supply of undergraduate university places has not always changed in response to demand.

Despite increases in applicant numbers between 2001 and 2004, university commencement numbers actually declined during this time, suggesting that the system was not responding to demand. Conversely, from 2005 to 2008 demand for university slowly declined while the number of places available increased. In 2009 there was a 5.2 per cent growth in applications which institutions responded to with an 8.1 per cent increase in the number of undergraduate commencements, representing the first time in the last decade that movement in supply and demand has been synchronised.

This change may be attributable to changes in policy. In 2008 and 2009, universities were for the first time allowed to ‘over-enrol’ by five per cent and still receive government funding for these students. To assist universities with the transition to a demand-driven funding and enrolment system, the Australian Government increased this to 10 per cent for 2010 and 2011. This, combined with the large number of universities that have at their own expense already pushed their enrolment loads above the 10 per cent limit, has resulted in a system that is largely demand-driven in all but name.

A key question facing institutional leaders is whether this growth is sustainable.

Evidence suggests that some change in universities’ scope and provision may be necessary to facilitate further growth in undergraduate enrolments in the medium-term. Projections by the Australian Bureau of Statistics indicate that the number of 18-22 year-olds in Australia – the dominant age group of commencing undergraduates – will remain relatively stable between now and 2022. Enrolment trends show that the age and mode of attendance of undergraduates has changed very little in the past decade. Universities will therefore need to tap into other age groups and different populations if continued growth in the sector is to be achieved at sustainable levels.

This article is based on the Joining the Dots research briefing ‘Student Demand: Trends, key markets and the movement towards demand-driven enrolment’ by ACER Senior Research Fellow Dr Daniel Edwards.
The role of regional higher education

Regional higher education institutions contribute significantly to the potential for Australia’s regional communities to develop a sustainable future, a recently released report suggests.

In June 2011 the Federal Department of Education, Employment and Workplace Relations (DEEWR) released an ACER report on the characteristics, motivations, experiences and outcomes of students enrolled at higher education institutions in regional areas of Australia.

The report revealed that, five years after completing their courses, 66 per cent of those who were enrolled at regional institutions and are employed are still living in regional areas. Report co-author and ACER Senior Research Fellow, Dr Sarah Richardson said the findings challenge assumptions that most regional students move to the city after graduation.

“We now know that the majority of people who study at a regional higher education institution stay in the area when they graduate,” said Richardson. “This means that higher education provision in regional areas is vital to ensure the sustainable development of regional communities.”

Richardson said that students at regional higher education institutions have different needs to students who study in cities due to differing demographics. Students enrolled at regional institutions are more likely to be female and tend to be older than their metropolitan counterparts. They are more likely to care for dependents and are more likely to be Indigenous.

“Regional students need more flexible modes of education, access to childcare facilities and greater financial support to cope with their caring responsibilities,” Richardson said.

The report examined information from seven national data sources, including the Australian Census, the Australasian Survey of Student Engagement, the Graduate Destination Survey, the Graduate Pathways Survey and the Higher Education Student Collection. It found that:

• Students at regional institutions are equally as satisfied with their studies and engaged as those at metropolitan institutions.

• Regional students feel that their studies prepare them for employment better than metropolitan students, and are more likely to feel that their employability and skills are ‘excellent’.

• Graduates from regional institutions are less likely than graduates from metropolitan institutions to move directly into further study, but equally likely to have done so within five years of completing their course.

Surprisingly, the study found that regional students are less likely to study subjects of direct relevance to regional economies – like natural and physical sciences, engineering or agriculture – than metropolitan students. The dominant areas of study of regional students are management and commerce, health, society and culture and education. Around 29 per cent of students who study in regional areas are employed as teachers in the same region five years after graduation.

Richardson notes that the lack of a targeted study of students who attend regional higher education institutions means that it is difficult to distinguish between students who study in remote areas of Australia and students who study in large regional towns. Despite this difficulty, the research shows that the presence of one or more higher education institutions in a regional area is likely to mean that its workforce is equipped with greater skills and expertise than would otherwise be the case.

The full report, Australian Regional Higher Education: Student characteristics and experiences, by ACER Senior Research Fellow Dr Sarah Richardson and ACER Research Fellow Tim Friedman, is available from http://research.acer.edu.au/higher_education/22/
Urban fringe growth planning

In planning for tertiary education provision it is important to explore the future size of the market. Rapid population growth in Australia’s cities suggests that there will be a boom in demand for tertiary places in outer metropolitan areas in the coming decades.

In Victoria, the state government’s Growth Areas Authority, responsible for the planning and development of Melbourne’s growth areas, has set out to project likely need for tertiary education in identified urban growth areas in Wyndham, Melton, Hume, Whittlesea, Casey, Cardinia and Mitchell.

The Growth Areas Authority is committed to creating well-designed neighbourhoods that provide more lifestyle, housing and employment choices for residents.

According to Peter Seamer, Chief Executive Officer at the Growth Areas Authority, “We need to move on from the old approach of travelling to central Melbourne to work or attend university.”

“Our new suburbs must be places where people can live, work and study, and it is going to take a shift in thinking to achieve that,” he said.

The Growth Areas Authority commissioned PhillipsKPA to advise it on the supply of and demand for tertiary education. As part of this project, ACER examined current participation in tertiary education and vocational education and training and estimated levels of future demand.

The ACER research showed differences in current participation between the outer fringes of Melbourne and the more established areas of the city.

It found that around 40 per cent of Year 12 completers from growth areas transition to university, compared to more than 50 per cent of Year 12 completers from the rest of Melbourne. On the other hand, a higher proportion of students from these areas go into vocational training than the average for the rest of Melbourne.

The research also showed that tertiary students from most growth areas were significantly more likely to be studying part time than students in the rest of Melbourne. In the area of Mitchell, for example, more than 70 percent of VET students study part-time, compared to 54 per cent in the rest of Melbourne, and more than 50 per cent of university students study part time, compared to 27 per cent of students in the rest of Melbourne.

“The mere fact that the core tertiary education age cohort is growing rapidly in the growth areas immediately suggests that there will be a growing demand for higher education and VET among the residents of these areas in the coming decade,” Dr Edwards said.

“If participation rates in these areas also increase, the need for tertiary education places will be even more urgent,” he said.

This works into the general aims for these areas in terms of employment as well as education.

“We are aiming for one job for every household in the growth areas”, said Peter Seamer, Chief Executive Officer at the Growth Areas Authority. “These employers will need managers and staff with different skills and skill levels, and will want to attract people who live nearby.”

“We want people to be able to live close to the new jobs, and for current and future residents to have access to higher education opportunities,” said Seamer.
System forecasting
Monitoring participation

Producing future academics

Results from the largest survey of Australian research students ever undertaken suggest the next wave of Australian academics feels their degree leaves them unprepared for teaching roles within universities.

The National Research Student Survey (NRSS) was conducted in June 2010 across 38 of Australia’s 39 universities and attracted responses from almost 12,000 students currently enrolled in PhD or Masters by Research courses. ACER worked in collaboration with the Centre for the Study of Higher Education to conduct the survey on behalf of the Australian Government Department of Education, Employment and Workplace Relations.

Research students surveyed indicated that, while their degree will be effective in preparing them for academic research and publication, it will not be particularly effective in preparing them for the task of university teaching and the associated planning.

The vast majority (83 per cent) of research students surveyed have at some time seriously considered an academic career and more than half (54.1 per cent) intend to pursue such work in the medium- to long-term. Just over two-thirds (67 per cent) of research students with a medium- to long-term academic career goal indicated that they would like a balance of teaching and research in a job, while 6 per cent would prefer to mainly teach.

ACER Senior Research Fellow and report co-author Dr Daniel Edwards said the survey’s findings suggest that those research students who intend to go on to an academic career do not feel their degree prepares them for teaching roles within universities.
“While the PhD and Masters by Research are qualifications with a focus on research at its core, only a small proportion of students have a research-only career in mind for the future,” said Edwards. “Further thinking about the extent of support provided to students during their research degree to prepare them for the academic tasks of teaching is needed.”

Only 14 per cent of all research students surveyed report having participated in teaching training during their research degree. Among those with academic career ambitions, the figure is slightly higher at 16 per cent. The majority of those who undertook training for university teaching felt that the training provided good preparation for teaching small groups but was not particularly effective in preparing them for course planning and administration.

For the research students who had not participated in training for university teaching during their research degree, the survey revealed a general lack of awareness of the existence of courses providing such training. More than half (54 per cent) of those research students with medium- to long-term ambitions to enter the academic workforce are unsure of whether their institution offers any training to support the development of teaching skills for university.

Research students with medium- to long-term academic ambitions who are aware of training but have not participated in it tended to indicate lack of time (37.7 per cent) as the reason for their non-involvement. Edwards said this finding is understandable, as the Australian PhD is one year shorter than in many other countries and the average length of a PhD dissertation in most study areas has increased by more than 50 per cent over the last 30 years to around 100 000 words.

Responses from university graduate education leaders to a supplementary Institutional Survey indicate that training in university teaching is not currently a highly valued commodity in most institutional recruitment processes, and many universities prefer to offer such training once a new graduate has been appointed to an academic position. Edwards suggests that decisions among research students not to engage in training for university teaching may also be based on their recognition of these facts.

However, Edwards said that it is important to remember that many research students undertake university teaching work at some period while completing their degree. More than half (57.2 per cent) of the research students surveyed worked at a university at some point during their degree. Of this group, more than 70 per cent worked in a teaching capacity, such as a lecturer or tutor. Overall only 27.6 per cent of those students who have at some stage been employed to teach at university have also participated in training for this teaching. This suggests that almost three quarters of research students who have been employed as teachers at universities have not received any training for teaching during their degree.

“Putting off teaching training until students take up their first full-time position may not be appropriate,” said Edwards.

In total 64.7 per cent of the group of students who have participated in teaching training are interested in entering the academic workforce, a difference of more than ten percentage points from the average across all research students. This suggests there is a link between teaching training and academic ambitions, however it is unclear which is the cause and which is the effect.

“Adequate training that instils confidence and builds skills in teaching may attract and motivate research students to consider an academic career pathway,” said Edwards.

Aptitude testing in university admissions

An ACER report released in May by the Australian Government Department of Education, Employment and Workplace Relations calls for the wider use of aptitude testing to ensure that senior secondary students with the capacity to do well at university are able to gain admission.

Report co-author, ACER Higher Education Research Director, Associate Professor Hamish Coates said there is a need to develop new approaches to university selection that are simple and transparent for prospective students, and that maintain practical benefits for institutions.

“Australia is actively seeking to boost participation in higher education with new funding and regulatory arrangements but nothing will change unless we seriously address admissions,” said Coates. “This report provides strong evidence that information from aptitude testing can help institutions manage the rush of additional applications.”

The report concluded that aptitude testing has the potential to increase diversity within the university population, especially in terms of gender and socioeconomic status. Importantly, aptitude test scores were shown to have significantly lower correlations with socioeconomic backgrounds than Year 12 academic results.

The ACER report was an evaluation of the government funded Student Aptitude Test for Tertiary Admission (SATTA) pilot program that began in 2007. The program involves the supply, management and evaluation of uniTEST – an aptitude test that assesses reasoning and thinking across the two broad domains of mathematics and science, and humanities and social sciences. The test was designed to complement existing selection criteria such as the Australian Tertiary Admission Rank (ATAR).

The report concludes that success at university is better predicted by uniTEST than by Year 12 results, but that the two in combination provide a more powerful means of predicting first-year performance than either measure on its own.

The study found that uniTEST identified students who would not otherwise have been offered a university place, and that these students performed on a par with students who entered university through other means, most commonly through Year 12 scores.

“Many Year 12 students who possess the ability to succeed at university do not achieve an ATAR that is high enough to gain entry,” said Coates. “uniTEST has the potential to identify ‘latent talent’ and facilitate the inclusion of capable individuals in the system.”

Seven recommendations are made in the report, relating to aptitude test implementation and continued data analysis. The report details an implementation process that involves: the assessment being promoted by key agencies as a credible supplementary quantitative selection criteria for university entrance; candidates sitting the test during their senior secondary study, at some stage from the end of Year 10; the test being administered in a flexible mode, likely online, and in multiple sittings; and informative reports being provided to assist students and institutions with their course choice and admissions decisions.

Coates notes that such a test will vary in its relevance to institutions depending on factors such as selectivity, course characteristics and demographics, but recommend that it should be endorsed universally. The report finds that, as with current admissions practices, the process should be centrally coordinated – though not regulated – in a way that sustains institutional autonomy over selection decisions.

Monitoring the university experience

ACER is leading a consortium of organisations in the development and implementation of a new national survey designed to measure higher education students' university experience.

The Australian Government Department of Education, Employment and Workplace Relations (DEEWR) has awarded a contract for the survey's development and implementation to ACER in partnership with the Centre for the Study of Higher Education at the University of Melbourne, and the Griffith Institute for Higher Education at Griffith University.

All Australian universities are participating in the development of the University Experience Survey (UES), which will provide evidence to inform performance-based funding arrangements. The survey will measure, and thus reward, aspects of the quality of teaching and student experience known to be associated with high level learning outcomes.

ACER's Higher Education Research Director, Associate Professor Hamish Coates, said the UES will allow the higher education sector and individual institutions to monitor and support improvement in the quality of university teaching and learning. The UES will enable international benchmarking.

According to Coates, the UES will play a role in assuring the quality of education and ensuring that institutions put strategies in place that ensure students from a wide range of backgrounds stay engaged, are retained, and succeed.

"With expansion of the system and increasing diversification of the people entering higher education, getting undergraduate education right is becoming more important than ever," said Coates.

The survey was first proposed in 2009, when DEEWR announced its intention to introduce performance funding for universities. A subsequent DEEWR discussion paper suggested a series of potential performance indicators for measuring quality and equity in Australian public universities for use under a new performance funding system. The discussion paper proposed a new UES as a potential indicator of the quality of student experience. In early 2010, the Minister for Education approved the inclusion of the UES in the performance indicator framework, to assess institutional performance in the area of student experience to determine eligibility to receive performance funding.

Coates said that, with so much at stake for universities, it is important that the UES is fair and equitable. To help ensure validity, the development is being overseen by a high-level Project Advisory Group comprised of education and technical experts.

Survey development and trialling for the UES is well underway. A pilot implementation is scheduled for August to test the validity and appropriateness of the instrument. The project is due for completion by the end of 2011.
Discovering drop out intentions

The latest research briefing from the largest survey of current university students ever undertaken in Australia has revealed that fewer first-year university students are considering dropping out of their course.

The 2010 Australasian Survey of Student Engagement (AUSSE) shows the number of students seriously thinking about abandoning their studies has declined from 35 per cent in 2008 and 30 per cent in 2009 to 27 per cent in 2010.

ACER’s Director of Higher Education Research, Associate Professor Hamish Coates, said the decline is positive but there are still a high number of students considering not completing their course.

“These trends are informative, but the reasons behind them are less clear,” said Coates. “So far, not enough has been done to understand and develop strategies to alleviate this phenomenon.”

New analyses from AUSSE 2010 revealed students who consider dropping out are more likely to be influenced by personal rather than financial or institutional reasons.

Boredom was the most commonly reported reason for leaving, chosen by 23 per cent of these students. Personal or social reasons such as change of direction (19 per cent), study-life balance (18 per cent), workload difficulty (17 per cent), and health or stress (16 per cent) were among the top ten of the 28 specific reasons for leaving listed on the survey. Students could choose more than one reason.

Fewer first-years reported leaving for financial reasons such as needing paid work (15 per cent), financial difficulties (14 per cent) and difficulty paying fees (5 per cent). Even fewer students nominated institutional factors such as reputation (7 per cent), quality (9 per cent) and academic support (8 per cent) as their motivation to drop out.

However, for international students, quality concerns, access to other opportunities, financial problems and difficulty paying fees were stand-out reasons for considering leaving. The proportion of international students (22 per cent) who have considered dropping out was lower than the proportion of all students (27 per cent).

Having discovered why students consider dropping out, Coates said the next step must be to identify and implement prevention strategies. However, as Coates notes, understanding that people seek to drop out for personal reasons rather than for more tangible practical reasons makes solving the attrition puzzle much more difficult.

Analyses of AUSSE data over the last five years have revealed that student support plays the most important role in early departure prevention. Student support comes in many forms, including student-teacher interaction.

“Using support services is one of the most important things people can do to succeed in higher education,” said Coates.

The percentage of people who feel less supported that considered early departure (39 per cent) was greater than for all students (27 per cent). The percentage of those students who reported higher perceptions of support said they had considered dropping out.

“Despite evidence that students who use university support services are far less likely to report dropping out, just over a third reported that they have never used such services”, said Coates.
increase for later-year students has been smaller. However by comparing results of student-teacher contact from AUSSE with similar surveys in countries such as the USA and Mexico, it is clear there is still room for improvement in Australia and New Zealand.

Coates said these analyses from AUSSE have immediate implications for higher education policy and practice.

“Students are telling us that contact with teaching staff is low and student support is low, which partly helps explain the drop out intentions,” said Coates. “A large part of the solution resides in providing more nuanced and directed forms of support.”

Coates suggests that bolstering support in key areas and making people from at-risk subgroups feel more supported is likely to yield positive dividends for higher education. He suggests that institutions should engage faculty in student support, educate students about the value of support, and individualise support.

“Improve support and increase contact with staff and satisfaction and retention is likely to increase,” said Coates.

AUSSE is a collaboration between ACER and participating universities. The 2010 administration of AUSSE was conducted by ACER in August last year and involved around 55,000 students from 55 Australian tertiary institutions.

The full research briefing, Dropout DNA, and the genetics of effective support by Associate Professor Hamish Coates and Ms Laurie Ransom, and further information on AUSSE is available from http://ausse.acer.edu.au
Student engagement
Indigenous students highly engaged with university study

Indigenous university students experience similar or higher levels of satisfaction and engagement with learning than their non-Indigenous peers, according to a research briefing paper from the Australasian Survey of Student Engagement (AUSSE) released in May.

The analysis also reveals that Indigenous students rate their relationships with other students and teaching staff just as positively as non-Indigenous students do and are significantly more likely to report positive relationships with administrative staff.

Yet despite such positive findings, Indigenous students are significantly more likely to seriously consider leaving their current institution prior to completing their studies.

The paper focuses on the responses of more than 500 Indigenous Australian students collected as part of the 2009 administration of AUSSE, representing one of the largest collections of data from Indigenous students to date. The paper is co-authored by Dr Christine Asmar, Senior Lecturer at Murrup Barak, the Melbourne Institute for Indigenous Development at the University of Melbourne, and Associate Professor Susan Page, Director of Macquarie University’s Warawara Department of Indigenous Studies.

“The puzzle is that, while Indigenous students are enthusiastic about their studies, and are engaged on similar or higher levels than their peers, they remain more likely to seriously consider leaving,” said Associate Professor Page.

Around 37 per cent of Indigenous students and 29 per cent of non-Indigenous students report that they plan to or have seriously considered leaving their current institution before finishing their qualification. The authors note that only one in 50 Indigenous students deliberately plan to leave before completing, as opposed to considering leaving. Nevertheless, Indigenous students who are older, male, who have a self-reported disability, who are from a non-metropolitan area, are studying externally or are receiving financial assistance all have higher early departure intentions than those who do not have those attributes. For many Indigenous students (as for non-Indigenous peers) a number of these factors can and do overlap.

Importantly, the analysis found that Indigenous students who report a high level of support from their institutions are significantly less likely to have departure intentions than those who report a low level of support. In one third of students’ comments referring to Indigenous issues, Indigenous centres were rated as among the 'best aspects' of how their universities engaged them in learning, leading the authors to conclude that such centres play a vital supporting role. They note, however, that more data is needed on this aspect of Indigenous engagement since most surveys do not ask about Indigenous centres.

Institutional support also stems from students’ academic interactions with teaching staff. Compared with their domestic, non-Indigenous peers, Indigenous students are significantly more likely to ‘often’ or ‘very often’ report discussing grades with teaching staff, work with teaching staff on non-coursework activities and discuss ideas with teaching staff. Indigenous students are also significantly more likely to report having positive relationships with administrative personnel than are their non-Indigenous peers.

Indigenous students report markedly higher levels of engagement in relation to work-integrated learning than non-Indigenous students. The authors suggest this difference is probably due to the fact that Indigenous students are generally older; are often employed before commencing study; and select courses directly relevant to their work. Around 43 per cent of Indigenous students say that their paid work is ‘quite a bit’ or ‘very much’ related to their field of study, compared with only 29 per cent of domestic, non-Indigenous students. Yet, again, the authors note that there is a lack of detailed data in this area.

The paper concludes by proposing new items for inclusion in national surveys, in order to deepen our understanding of significant difference between Indigenous and non-Indigenous students. Those areas include: how students’ studies relate to their employment; whether student interactions are mainly with Indigenous staff and students (or not); the roles of Indigenous centres and of community; and whether departure intentions are influenced by factors such as health.

“We have a clear picture of what Indigenous students think about university, but much less idea of why they think it,” said Dr Asmar. “Tapping into the ‘hidden stories’ of Indigenous engagement and success will help to better inform our efforts to attract, support, engage and retain our Indigenous students.”

AUSSE is a collaboration between ACER and participating universities. The full briefing, Dispelling myths: Indigenous students’ engagement with university, is available from http://ausse.acer.edu.au
Engaging the ‘forgotten qualification’ students

Results from a new study of coursework postgraduate students’ engagement in education suggest that, while coursework postgraduates in Australasia tend to have higher levels of engagement than undergraduate students, Australian and New Zealand higher education providers could do more to improve student and staff interactions and provide enriching educational experiences.

More than 10 000 students from 15 higher education providers in Australia and New Zealand participated in the first full administration of the Postgraduate Survey of Student Engagement (POSSE) in 2010. ACER released a research briefing paper on the results in late April.

ACER Senior Research Fellow Dr Daniel Edwards said POSSE is the first major effort to collect meaningful data from postgraduate coursework students in Australia and New Zealand.

“‘The coursework postgraduate population is very important to higher education, but often these are the forgotten qualifications that come in between undergraduate and research higher degrees,’” Edwards said.

POSSE is closely linked to the Australasian Survey of Student Engagement (AUSSE), the largest survey of current university students undertaken in Australia and New Zealand. The surveys provide internationally comparable data relating to student engagement and learning outcomes.

POSSE 2010 reveals that coursework postgraduate students have higher levels of engagement than undergraduate students, particularly in the areas of Academic Challenge, Work Integrated Learning and Higher Order Thinking. More specifically, coursework postgraduate students indicate greater involvement in synthesising ideas, blending academic learning with workplace experience and in making judgements about the value of information.

International students in coursework postgraduate studies have higher levels of engagement than domestic students on all engagement scales except Work Integrated Learning. Outcomes were more evenly split, with International students recording higher General
Development, Career Readiness and General Learning Outcomes, while domestic students have higher levels of Overall Satisfaction, Average Overall Grade and Higher Order Thinking.

Engagement levels among postgraduate coursework students vary in relation to the field of education studied. Information technology students tend to have lower levels of engagement than those from other fields, particularly in Work Integrated Learning, Higher Order Thinking and Overall Satisfaction. Health students in coursework postgraduate degrees report very high scores on the Work Integrated Learning scale but much lower scale scores than the other fields for Active Learning.

In each field of study, less than 5 per cent of students said they ‘very often’ interact with teaching staff on other activities. This is a worrying finding given that research has shown the contact students have with staff are among the strongest influences on positive learning outcomes. Only in the science fields does students and staff working together outside of class appear to be evident, possibly as a results of experiments conducted in these fields that require extra time. Science students are also substantially more likely to express a desire to continue on to a research degree while management, engineering and creative arts students show the least interest in further study involving research.

Departure Intentions are particularly high for architecture and information technology students. Coupled with relatively low satisfaction for postgraduates in this field, these results suggest that further efforts to engage and encourage these students might improve their university experience and retain them through to graduation. Early-departure intentions are also higher for later-year coursework postgraduate students than for those in their first-year. While the average score for this group is still relatively low, the finding here suggests that additional attention to supporting these students through the final stages of their degrees may be worthwhile.

POSSE is a collaboration between ACER and participating universities. The full briefing, Monitoring risk and return: Critical insights into graduate coursework engagement and outcomes, is available from http://ausse.acer.edu.au
Australian Council for Educational Research

The Australian Council for Educational Research (ACER) is one of the world’s leading educational research centres. Its mission is to create and promote research-based knowledge, products and services to improve learning across the lifespan.

ACER was established in 1930 and for more than 80 years has built a strong reputation as a provider of reliable support and expertise to education policy makers and professional practitioners. As a not-for-profit organisation, independent of government, ACER receives no direct financial support and generates its entire income through contracted research and development projects and through products and services that it develops and distributes. ACER has experienced significant growth in recent years and now has more than 300 staff located in Melbourne, Sydney, Brisbane, Perth, Adelaide, Dubai and New Delhi.

In recent times ACER has expanded on its program of research and development in support of learning in vocational education and training and in higher education institutions while maintaining and expanding work undertaken in support of schools.

ACER’s extensive research capacity is distributed across nine research programs:

• **Higher Education** focuses on admissions and outcomes testing, large-scale surveying, student engagement, research training and teaching quality, demographic modelling and planning, workforce and leadership capability assessment, designing quality assurance systems, analysis and reporting of complex data, and policy analysis and review.

• **Assessment and Reporting: Humanities and Social Sciences** focuses on cross-curricular skills such as literacy, critical thinking, interpersonal development and verbal reasoning, and subject-based disciplines such as English and Studies of Society and Environment.

• **Assessment and Reporting: Mathematics and Science** focuses on cross-curricular skills such as numeracy and abstract, scientific and quantitative reasoning as well as mathematics and science subject-based disciplines.

• **National Surveys** conduct a number of large-scale surveys of nationally-representative samples of students that involves expertise in sampling, survey design and implementation, data analysis and reporting of results with a national focus to a variety of audiences.

• **International Surveys** conduct sampling, survey management, scaling methodology, survey data analysis and the interpretation and reporting of results from large-scale international comparative studies.

• **Systemwide Testing** identifies more effective ways of monitoring achievement across entire education systems.

• **Teaching, Learning and Transitions** focuses on the relationship between teacher professional development and improved student learning, and on the interconnections between education and training, the labour market, and the wider society.

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In addition to being a national centre for educational policy research and advice, ACER develops and provides a range of research-based products and services to support the work of professional practitioners.

ACER provides secure, fee-for-service testing programs to schools, universities, employers and professional organisations. These programs include selection tests for entry to schools and universities, scholarship tests and tests for diagnostic and monitoring purposes, and recruitment tests.

The organisation also encompasses ACER Press, the Cunningham Library, and the ACER Institute.

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t 03 9277 5555
f 03 9277 5500
e highereducation@acer.edu.au
w www.acer.edu.au/highereducation

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